

22. A resonant optical modulator as recited in claim 5, wherein the delay line and the stub each have an impedance, and the impedance of the active modulator electrode is compensated for by the impedance of the delay line and the impedance of the stub.

### REMARKS

Claims 1-22 are pending. Claims 16-20 have been withdrawn from consideration. Claims 21 and 22 have been added by this Amendment.

Claims 1-6 and 9-15 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,572,610 to Toyohara ("Toyohara"). Claim 1 was further rejected under 35 U.S.C. § 103(a) as being obvious over Toyohara. Claims 2 and 7-8 were also further rejected under Section 103(a) as being obvious over U.S. Patent No. 5,854,862 to Skeie ("Skeie"). These rejections are respectfully traversed.

Resonant optical modulators are useful for narrow band applications, e.g., around 2 GHz, for applications such as Stimulated Brillouin scattering (SBS) suppression. However, by definition, resonant modulators suffer from an impedance mismatch between the optical modulator and the electrode carrying the optical modulator load. See, e.g., page 3, lines 4-22 of Applicants' specification. This mismatch may create problems.

According to an exemplary embodiment, this mismatch is accounted for by using a resonant optical modulator. The resonant optical modulator accounts for the impedance mismatch between the electrode and the modulator load. Also, the resonant optical modulator includes a fully integrated matching network for matching the impedance of the signal source.